sense channel **6108** (also referred to herein as an event detection and demodulation circuit) in panel subsystem **6106**.

[0169] Computing system **6100** can also include host processor **6128** for receiving outputs from panel processor **6102** and performing actions based on the outputs that can include, but are not limited to, moving an object such as a cursor or pointer, scrolling or panning, adjusting control settings, opening a file or document, viewing a menu, making a selection, executing instructions, operating a peripheral device coupled to the host device, answering a telephone call, placing a telephone call, terminating a telephone call, changing the volume or audio settings, storing information related to telephone communications such as addresses, frequently dialed numbers, received calls, missed calls, logging onto a computer or a computer network, permitting authorized individuals access to restricted areas of the computer or computer network, loading a user profile associated with a user's preferred arrangement of the computer desktop, permitting access to web content, launching a particular program, encrypting or decoding a message, and/or the like. Host processor **6128** can also perform additional functions that may not be related to panel processing, and can be coupled to program storage **6132** and display device **6130** such as an LCD display for providing a UI to a user of the device. Display device **6130** together with touch screen **6124**, when located partially or entirely under the touch screen, can form touch screen **6118**.

[0170] Note that one or more of the functions described above can be performed by firmware stored in memory (e.g. one of the peripherals **6104** in FIG. **61**) and executed by panel processor **6102**, or stored in program storage **6132** and executed by host processor **6128**. The firmware can also be stored and/or transported within any computer-readable medium for use by or in connection with an instruction execution system, apparatus, or device, such as a computer-based system, processor-containing system, or other system that can fetch the instructions from the instruction execution system, apparatus, or device and execute the instructions. In the context of this document, a "computer-readable medium" can be any medium that can contain or store the program for use by or in connection with the instruction execution system, apparatus, or device. The computer readable medium can include, but is not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus or device, a portable computer diskette (magnetic), a random access memory (RAM) (magnetic), a read-only memory (ROM) (magnetic), an erasable programmable read-only memory (EPROM) (magnetic), a portable optical disc such a CD, CD-R, CD-RW, DVD, DVD-R, or DVD-RW, or flash memory such as compact flash cards, secured digital cards, USB memory devices, memory sticks, and the like.

[0171] The firmware can also be propagated within any transport medium for use by or in connection with an instruction execution system, apparatus, or device, such as a computer-based system, processor-containing system, or other system that can fetch the instructions from the instruction execution system, apparatus, or device and execute the instructions. In the context of this document, a "transport medium" can be any medium that can communicate, propagate or transport the program for use by or in connection with the instruction execution system, apparatus, or device. The transport readable medium can include, but is not limited to, an electronic, magnetic, optical, electromagnetic or infrared wired or wireless propagation medium.

[0172] FIG. **62***a* illustrates an example mobile telephone **6236** that can include touch screen **6224** and display device **6230**, the touch screen including pixels with dual-function capacitive elements according to embodiments of the invention.

[0173] FIG. **62***b* illustrates an example digital media player **6240** that can include touch screen **6224** and display device **6230**, the touch screen including pixels with dual-function capacitive elements according to embodiments of the invention.

[0174] FIG. **62***c* illustrates an example personal computer **6244** that can include touch screen (trackpad) **6224** and display **6230**, the touch screen of the personal computer (in embodiments where the display is part of a touch screen) including pixels with dual-function capacitive elements.

[0175] Although embodiments of this invention have been fully described with reference to the accompanying drawings, it is to be noted that various changes and modifications will become apparent to those skilled in the art.

What is claimed is:

1. A touch screen including display pixels with capacitive elements, the touch screen comprising:
- a plurality of first common voltage lines connecting capacitive elements in a plurality of adjacent display pixels; and
- a second common voltage line connecting two or more first common voltage lines.

2. The touch screen of claim **1**, wherein the capacitive elements operate collectively as at least one of a drive line and a sense line of a touch sensing system.

3. The touch screen of claim **1**, wherein at least one of a first common voltage line and a second common voltage line comprises at least two layers of conductive material.

4. The touch screen of claim **3**, further comprising:
- conductive vias formed between the at least two layers of conductive material.

5. The touch screen of claim **1**, wherein the capacitive elements include least one of pixel electrodes and storage electrodes.

6. The touch screen of claim **1** including a plurality of second common voltage lines, wherein a plurality of first common voltage lines and a plurality of second common voltage lines include breaks that electrically separate groups of capacitive elements to form a plurality of regions of pixels, wherein all of the capacitive elements of pixels in a region are electrically connected together.

7. The touch screen of claim **6**, further comprising:
- touch sensing circuitry that transmits a stimulation signal through a group of capacitive elements.

8. The touch screen of claim **7**, wherein a group of capacitive elements form at least one of a sense line and a drive line of a touch sensing system.

9. The touch screen of claim **7**, wherein the capacitive elements include at least one of a fringe field electrode, a pixel electrode, and a storage electrode.

10. The touch screen of claim **7**, wherein the capacitive elements include upper and lower pixel electrodes.

11. The touch screen of claim **10**, wherein the upper and lower pixel electrodes of each pixel are electrically connected such that a relative voltage between the upper and lower pixel electrodes of each pixel remains constant when a modulated stimulation signal is applied by the touch sensing circuitry.

12. The touch screen of claim **7**, wherein the touch sensing circuitry includes a charge amplifier.